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4 **ABSTRACT**
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7 **MULTI-VALVE INJECTION/ASPIRATION MANIFOLD WITH NAC**
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9 An IV manifold includes a plurality of injection/aspiration ports including a
10 needleless access port (NAC). A check valve included in the manifold is generally
11 located at an upstream end of the manifold. However, the check valve may alternatively
12 be located between injection ports. An aspiration port can be formed with a second seal
13 disposed on the side of the valve element opposite a first seal. Two-way aspiration can
14 be provided by a valve having a cage with or without compressible characteristics to
15 accommodate low tolerance fittings. Alternatively, two way aspiration can be provided
16 by the NAC having a single elongate valve element including a plug at one end. The
17 elongate valve element has properties for resiliently and sealingly biasing the plug into
 an aperture of the NAC. In use the Plug is mechanically displaced by insertion of a
 male Luer for injection or aspiration.